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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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02/21/2001

Hidemasa Yasuda

0879-0298P

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10/30/2006

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EXAMINER

VILLECCO, JOHN M

ART UNIT

PAPER NUMBER

2622

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/788,496

Applicant(s)

YASUDA, HIDEMASA

Examiner

John M. Villecco

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4 and 10-12 is/are allowed.
- 6) ☒ Claim(s) 1,2 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Regarding claims 1 and 2, applicant has amended the apparatus claims to more clearly recite a combination of elements directed to a camera. More specifically, applicant has added an image processing circuit and a controller and has clearly defined the relationship therebetween. With respect to claims 1 and 2, applicant argues that Lee fails to disclose a controller that is connected to both an image part and a signal processing part and outputs a command control signal to the correcting part of the signal processing part (see page 13 of applicant's arguments). The examiner believes that applicant's amendment has overcome the Lee reference. However, new art has been used to reject claims 1 and 2. Please see the discussion of claims 1 and 2 on the following pages.

2. As for claim 6, applicant argues that Christoff merely discloses a gain value computed in response to comparing a brightness value to a threshold, wherein the amplifier adjusts the brightness of the image according to the gain value. However, the examiner can find nothing in claim 6 that requires a digital gain amplifier to be the device that adjusts the brightness. The claims merely requires:

wherein said microcomputer is adapted to obtain a correction value from the EEPROM according to the determined brightness level of the digital image signals and to output a command control signal to the image signal processing circuit for automatic correction processing of the digital image signals without lowering an SN ratio and before the digital image signals are converted into the analog image signals by the D/A converter.

Christoff clearly discloses that brightness of the incoming image signal is calculated and an image signal is corrected according to the brightness value. The correction is performed by offsetting the brightness levels of the video signals by a correction value. The controller (136) controls the shutter speed of the imager (108). Based upon the calculated brightness value being below a threshold value, a correction value for the black level is obtained from the table. See Figure 3. Thus, the black level of the digital signal is adjusted using the DSP (128). The examiner maintains that one of ordinary skill in the art would have found it obvious to adjust the brightness of the image signal of Yoshida in a similar manner.

3. For the above-mentioned reasons, the rejections from the previous office action will be maintained with discussion of the amendments as appropriate.

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee (U.S. Patent No. 5,546,134) in view of Christoff et al. (U.S. Patent No. 6,518,998).**

6. Regarding *claim 1*, Lee discloses an apparatus for correcting the brightness of an image signal. More specifically, Lee discloses an, A/D converter (10), an average picture level (APL) calculator (20) for determining the brightness of the image signal, a look-up table (30) for correcting the video signal according to the calculated brightness value, and a D/A converter

Art Unit: 2622

(40). See column 4, line 65, to column 5, line 11. The A/D converter, the look-up table block, and the D/A converter are interpreted by the examiner to be the image processing circuit. The average picture level (APL) calculator (20) is interpreted to be part of the controller. A command control signal (output of the APL) is sent from the APL calculator (20) to the look-up table block to correct the brightness of the image signal. Additionally, Lee discloses that the correction of the video signal is done to correct signals picked up by cameras and displayed by a display. See column 1, lines 19-24. Since the limitation of correcting the video signals without lowering a S/N ratio appears to be a functional limitation, Lee needs only to be capable of performing video signal correction without lowering a S/N ratio. Therefore, since the claimed structure and the structure taught by Lee are identical, it is inherent that the structure of Lee would also correct video signals without lowering a S/N ratio.

Lee, however, fails to specifically disclose that the signal processing circuitry is implemented directly in a camera device. Christoff, on the other hand, discloses that it is well known in the art to include a controller for calculating brightness and connected to the imager and the image processor in a camera device. More specifically, Christoff discloses an imager (108) and a digital image processor (128). See column 3, line 65 to column 4, line 7. As discussed in Lee, the controller is interpreted to be the APL calculator in Lee. Clearly, if the circuit of Lee were used directly in a camera, the APL calculator would be indirectly connected to the imager and directly connected to the image processor. By directly implementing a brightness adjusting circuit directly in a camera, the brightness of an image signal can be adjusted in camera in real-time or before permanent saving. Therefore it would have been

Art Unit: 2622

obvious to one of ordinary skill in the art at the time the invention was made to implement the circuit of Lee directly into a camera device so that brightness can be adjusted in the camera.

7. As for **claim 2**, Lee discloses an apparatus for correcting the brightness of an image signal. More specifically, Lee discloses an, A/D converter (10), an average picture level (APL) calculator (20) for determining the brightness of the image signal, a look-up table (30) for correcting the video signal according to the calculated brightness value, and a D/A converter (40). See column 4, line 65, to column 5, line 11. The A/D converter, the look-up table block (correcting part), and the D/A converter are interpreted by the examiner to be the image processing circuit. The average picture level (APL) calculator (20) is interpreted to be part of the controller. A command control signal (output of the APL) is sent from the APL calculator (20) to the look-up table block to correct the brightness of the image signal. Additionally, Lee discloses that the correction of the video signal is done to correct signals picked up by cameras and displayed by a display. See column 1, lines 19-24. Since the limitation of correcting the video signals without lowering a S/N ratio appears to be a functional limitation, Lee needs only to be capable of performing video signal correction without lowering a S/N ratio. Therefore, since the claimed structure and the structure taught by Lee are identical, it is inherent that the structure of Lee would also correct video signals without lowering a S/N ratio.

Lee, however, fails to specifically disclose that the signal processing circuitry is implemented directly in a camera device. Christoff, on the other hand, discloses that it is well known in the art to include a controller for calculating brightness and connected to the imager and the image processor in a camera device. More specifically, Christoff discloses an imager (108) and a digital image processor (128). See column 3, line 65 to column 4, line 7. As

Art Unit: 2622

discussed in Lee, the controller is interpreted to be the APL calculator in Lee. Clearly, if the circuit of Lee were used directly in a camera, the APL calculator would be indirectly connected to the imager and directly connected to the image processor. By directly implementing a brightness adjusting circuit directly in a camera, the brightness of an image signal can be adjusted in camera in real-time or before permanent saving. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the circuit of Lee directly into a camera device so that brightness can be adjusted in the camera.

8. With regard to *claim 5*, Lee discloses an embodiment in Figure 5 that does not include a variable gain amplifier.

9. **Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (U.S. Patent No. 2004/0165070) in view of Christoff et al. (U.S. Patent No. 6,518,998).**

10. Regarding *claim 6*, Yoshida discloses a camera (10) that includes a lens (12), a diaphragm (50), an image sensor (52), an image signal processing circuit that includes an analog processing circuit (54), an A/D converter (56), a digital signal processing circuit (58), a gamma correcting circuit, a YC signal generating circuit, and a D/A converter (78), a display (28) for displaying images output from the digital signal processing circuit (58), and a CPU. See paragraph 0053. The CPU (66) and control circuit (74) operate to control the diaphragm of the camera in response to the processed video signals. The CPU (66) serves as the display controlling circuit.

Yoshida, however, fails to explicitly disclose that the camera includes a microcomputer connected to an EEPROM for controlling the diaphragm, shutter speed, and brightness of the

Art Unit: 2622

image signal. Christoff, on the other hand, discloses a camera that is capable of adjusting the brightness of an image signal by offsetting the image signal. More specifically, Christoff discloses a camera that includes an imager (108), a D/A converter (132), a video monitor (116), and signal processing circuitry (112) that includes an amplifier (120), an A/D converter (124), a DSP (126), and a controller (136). As disclosed in column 3, line 65 to column 4, line 7, a brightness of the incoming image signal is calculated and an image signal is corrected according to the brightness value. The image signal is then sent to the video monitor (116) after being corrected. The correction is performed by offsetting the brightness levels of the video signals by a correction value. The controller (136) controls the shutter speed of the imager (108). Based upon the calculated brightness value being below a threshold value, a correction value for the black level is obtained from the table. See Figure 3.

Christoff, however, fails to disclose that the tables are stored in an EEPROM. Official Notice is taken, however, that EEPROM's are well known in the art for storing data. One of ordinary skill in the art would have recognized that an EEPROM would provide an excellent way of accessing the data stored in the tables shown in Figure 3.

11. **Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshida et al. (U.S. Patent No. 2004/0165070) in view of Christoff et al. (U.S. Patent No. 6,518,998) and further in view of Eino (U.S. Patent No. 6,120,435).**

12. Regarding *claim 7*, as mentioned above in the discussion of claim 6, both Yoshida and Christoff disclose the limitations of the parent claim. However, neither of the aforementioned reference discloses the use of a switch to select between a correction mode and a non-correction



Art Unit: 2622

mode. Eino, on the other hand discloses a method of adjusting the brightness of an image, wherein a button (25A) is used to implement the brightening procedure. See Figure 3.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a switch in order to implement the brightness correction so that a user may manually select the desired brightness of the image.

***Allowable Subject Matter***

13. Claims 8 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter:

Regarding **claim 8**, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest a variable gain amplifier which is controlled by the microcomputer to provide an optimum gain value falling within an effective gain range provided by a data table within the EEPROM and which does not permit a lowering of the SN ratio.

15. **Claims 4 and 10-12 are allowed.**

16. The following is an examiner's statement of reasons for allowance:

Regarding claims 4 and 10-12, the primary reason for allowance is that the prior art fails to teach or reasonably suggest a gain controlling part that controls a gain of the variable gain amplifier according to the brightness level of the video signals, wherein the gain of the variable

Art Unit: 2622

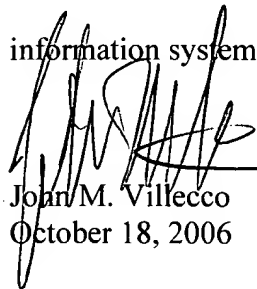
gain amplifier is controlled to an optimum gain value falling within an effective gain range and which does not permit a lowering of an SN ratio.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (571) 272-7319. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



John M. Villecco  
October 18, 2006